FARMLINE

United States Department of Agriculture

Economic Research Service

Volume X
Number 8
August 1989

Latin Debt Burden Still Stifling Trade

Grazing Fees: Are They Fair? page 10

Editor
Jack Harrison

Editorial Assistant
Martha R. Evans

(202) 786-1494

Assistant editors: Doug Martinez, Juliana King, Judith Foulke, Wendy Pinchas
Art director: Barbara Allen
Cover design: Victor Newman

Contents of this magazine may be reprinted without permission.

FARMLINE is published 11 times a year by USDA's Economic Research Service. Send questions, requests, and editorial comments to *FARMLINE*, Room 228-USDA, 1301 New York Avenue NW, Washington, DC 20005-4789.

Please include your mailing label with change-of-address and other requests related to your subscription.

Subscription price is $11 to U.S. addresses ($13.75 foreign). Individual copies $5.50. For fast, personal service, call our order desk toll-free at **1-800-999-6779**. (Phone lines are open weekdays, 8:30-5:00 Eastern time.) Charge your order to MasterCard or VISA, or order by mail. Make your check or money order payable to ERS-NASS and send to: ERS-NASS, P.O. Box 1608, Rockville, MD 20850. Ask for *FARMLINE*. Include your complete address with ZIP code and daytime telephone. Sorry, but refunds cannot be issued.

The Secretary of Agriculture has determined that publication of this periodical is necessary in the transaction of public business required by law of this Department. Use of funds for printing *FARMLINE* has been approved by the Office of Management and Budget. Use of commercial or trade names does not imply approval or endorsement by USDA.

PERSPECTIVES

U.S. HOG PRODUCERS HAVE SEEN BETTER TIMES. June was the tenth consecutive month that estimated net returns in the hog industry were below the breakeven point. A sharp rise in feed costs because of last year's drought has been the main problem. Another factor: low prices for barrows and gilts.

Despite the steep drop in profits, however, the number of hogs and pigs on farms has been reduced only slightly. As of June 1, the inventory of breeding hogs was 3% below a year earlier and market hogs were down 1%.

Liquidation of breeding stock began last summer when both livestock and crops were stressed by hot, dry weather. Between June and December last year, the U.S. breeding herd was reduced by about 500,000 head. But during the first half of 1989, breeding inventories stabilized even though returns remained negative. If 1989 crop conditions are favorable, breeding inventories probably will hold steady, exhibiting normal seasonal fluctuations, through mid-1990.

The changing structure of the U.S. hog industry might be the reason that the breeding inventory has not been trimmed more in the face of negative returns, says ERS analyst Kevin Bost. Larger, specialized hog operations may be maintaining steady growth while liquidation is taking place among smaller, "secondary" units, he adds. A secondary unit is one that is part of a multiple-enterprise farm and often depends more on home-grown feed. A specialized unit is likely to be better capitalized, have a larger investment in fixed facilities, practice more intensive management, and tend to be more cost-efficient. Such operations have strong incentives to maximize output.

Returns to hog producers have been improving, but are not likely to encourage significant further expansion before mid-1990, Bost says. Barrow and gilt prices at 7 leading markets averaged about $41.50 per cwt in the first half of 1989, and are forecast to average about $42 for the year. This would be the lowest annual average price since 1980.

U.S. pork consumption is likely to be near 64 pounds per capita in 1989, up slightly from 1988, according to ERS projections. Over the past 20 years, consumption has ranged from 51 to 68 pounds per year. Pork is expected to comprise about 29% of total red meat and poultry consumption this year. Retail pork prices are likely to average 3 to 5 cents lower than last year's $1.84 per pound.

Commercial pork production in 1989 may reach 15.9 billion pounds, up 2% from 1988, and the largest annual production since 1980. Production in the second half of 1989 is likely to remain unchanged from a year earlier, after a 4% increase in the first half.

Hog prices could be supported by more intense competition among packers, Bost says. Slaughter capacity appears to have expanded significantly in the past year. The expanded capacity will be competing for a slightly smaller supply of hogs.

FARMLINE

AGRICULTURE...NATURAL RESOURCES...RURAL DEVELOPMENT
Practical economic intelligence from USDA's Economic Research Service

FEATURES

Latin Debt Crisis Still Stifling Trade *by Priscilla Glynn* 4

The Latin American debt crisis was an important factor in the nosedive taken by U.S. farm exports during the early 1980's. And the debt crisis is not over yet. Efforts to alleviate it have met with limited success. But new tactics are being tried.

Federal Grazing Fees: Are They Fair? *by Judith Foulke* 10

About 27,000 farmers and ranchers graze livestock on federal rangelands in western states. The fees they pay are criticized by some people as too low and defended by others as fair and reasonable. Economists have taken a look at the lease and allotment policies.

Policy Changes Boost Wheat Exports *by Jack Harrison* 14

U.S. wheat exports have increased substantially during the last few years. Policy changes, specifically the Export Enhancement Program and lower loan rates, have been important factors in the sales gains. Other factors include lower competitor yields and higher demand by the Soviet Union and China.

DEPARTMENTS

Reports in the News: Wheat Statistics; Poultry Production 9

Agricultural Roundup: U.S. Trade Balance 16

Farmline Trends: Monthly Price Monitor; America's Changing Menu 17

Latin Debt Crisis Still Stifling Trade

The Latin American debt crisis, which has played an important role in substantially reducing U.S. agricultural exports, had its roots in the 1970's, a period of unprecedented economic growth for the region.

That growth was fueled by massive commercial borrowing spurred by very low real international interest rates. At that time, commercial banks had relatively cheap, plentiful petrodollars to lend to developing countries and were optimistic about the countries' ability to repay the loans because it appeared that world inflation would persist for the foreseeable future. In a climate of rising prices, rapid growth, and easy credit, the region's indebtedness grew more than tenfold between 1970 and 1982—from $27 billion to about $300 billion.

The cost of servicing that debt soared in the early 1980's as both nominal and real interest rates rose to record post-World War II levels. "At the same time," explains economist Tim Baxter of USDA's Economic Research Service, "Latin America's capacity to meet its obligations dropped precipitously when global recession depressed commodity prices and cut deeply into export earnings, and the region's access to commercial credit was sharply curtailed."

The debt crisis arose from this combination of high interest payments, falling export earnings, and limited access to new loans.

Compounding Latin America's financial predicament has been the leveling off of resource flows from the major international financial institutions—the International Monetary Fund (IMF), the World Bank, and the Inter-American Development Bank.

Most of Latin America's major debtors, including Brazil, Mexico, and Argentina, are now paying more in interest to these public institutions than they receive in new loans. Because of this, Latin American governments are starving for the resources needed to obtain the vital imports and new investments that would sustain growth.

Latin America's capacity to meet its obligations dropped when global recession cut commodity prices and export earnings.

In the past 5 years, the region has paid out $120 billion more in principal and interest than it has received in new loans. To make these payments, Latin American countries have had to reduce imports dramatically.

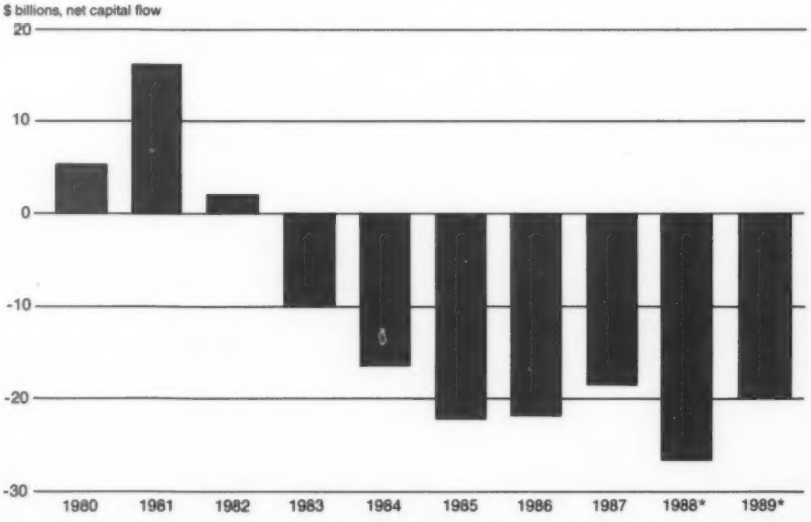
For the entire region, imports have dropped nearly 30 percent since 1980. In 1981-86, Argentina's total trade fell 50 percent, and its agricultural trade dropped 25 percent. Brazil's total trade fell 35 percent, although its agricultural trade rose 13 percent. Mexico's total trade plummeted 54 percent, and its agricultural trade dropped 52 percent.

Domestic investment in the region has declined by some 30 percent, and foreign investment has plunged by about 75 percent. "In many countries," states Baxter, "machinery, plants, and infrastructure are depreciating faster than they are being replaced, and regional growth has been imperiled for years to come."

Latin America's economic plight has also proved costly for the world's industrialized countries—and for none more than the United States. As Latin American markets have shrunk, the United States has lost $20 billion to $30 billion a year in exports, making it harder to reduce our own trade deficit and eliminating thousands of jobs in U.S. factories.

ERS economists Mathew Shane and David Stallings note that U.S. agriculture has been particularly hurt by the debt crisis. Many countries that had been major markets for U.S. commodities are now unable to buy our food products because of their own diminished foreign exchange earnings.

More Capital Has Been Flowing Out of Latin America Than In, Since the Early 1980's



*Estimated.
Sources: International Monetary Fund and Economic Research Service.

Baxter says that U.S. exports to Mexico alone totaled nearly $5 billion less in 1987 than in 1980. Furthermore, major U.S. banks hold large portfolios of shaky Latin American debt. The loans of U.S. money center banks to Latin America continue to exceed the banks' equity capital (assets owned by stockholders).

Baxter explains that U.S. interest rates contribute to the debt in an indirect way, because these countries' payments on their debts are generally in U.S. dollars and increase when interest rates on dollar-denominated assets rise.

Former Treasury Secretary James Baker's plan to solve the Third World debt problem consisted of giving the countries funds that they could invest, using the proceeds to repay their debts. The plan was based on an assumption that the developing countries could grow out of their debt problems, and its strategy relied mainly on new public and private lending to provide the region with resources needed to rekindle growth and defuse the debt crisis.

"The Baker plan succeeded in keeping complete financial disaster for the developing counties at bay," Baxter says. "Consequently, the world financial situation is in a better position to withstand such difficulties as debt foreclosure now than in, say, 1982. Nevertheless, the fundamental debt problems of Latin America still await resolution."

Solutions to Debt Problem

According to Baxter, any solution to Latin America's debt problem requires two reinforcing initiatives. First, Latin American countries must themselves undertake needed reforms to improve the management of their economies. Second, they must have access to significantly larger amounts of external resources.

Baxter goes on to say that Latin American countries must adopt sensible policies to ensure that the external capital provided is used productively. Governments must trim fiscal deficits, which can lead to high inflation and divert scarce resources from private investment. These governments must allow markets to determine most prices, eliminate subsidies to inefficient public and private enterprises, and maintain realistic exchange rates that provide export incentives.

The infusion of new resources—for investments and vital imports—is essential for the successful implementation of economic reform and growth programs. Given the currently inadequate flows of outside financing from both private and official creditors (and the meager prospect of any significant increase), the necessary financial resources would have to come mostly from reduced debt payments.

Treasury Secretary Nicholas Brady recently revealed the Administration's new plan to bring down the debt. Under the Brady plan, the IMF and the World Bank would make funds available to help countries reduce their debt load and guarantee payment of the remainder.

"Some form of debt relief is needed to solve the developing countries' problems," Baxter explains. "Their ability to pay off the existing debt level is nonexistent. The investment opportunities to pay it back just aren't there."

"The Brady plan calls for a 20-percent debt reduction, mostly in adjustments to interest rates," states Baxter. Some observers have indicated that reductions of 40-60 percent may be necessary to significantly trim the debt in some countries. Cuts in interest rates, rather than in the principal amounts owed, would be more advantageous to the debtor nations.

U.S. government officials have indicated that viable debt/equity swap programs (retiring some of a country's debt in exchange for land conservation), which have helped reduce the stock of debt in several countries, could form part of the solution to the crisis.

In addition, some creditor countries that are able to provide additional financing to debtor nations may wish to do so. Creditor governments could also review their regulatory, accounting, and tax regimes to remove impediments to debt reduction.

The precise combination of relief and new lending will have to be determined on a country-by-country basis. Economists say that every nation pursuing sound economic policies should have its debt payments fixed at a level that allows both recovery and sustained growth. That growth must be sufficiently vigorous—at least 5 percent per year for the region as a whole—to reduce unemployment, increase per capita income growth, permit meaningful social advances, and prevent political instability.

For most of the larger debtors, reducing interest rates or principal debt over several years, combined with some stepped-up lending and debt rescheduling (altering the schedule of payments and negotiating a much narrower margin by which their interest rates exceed the LIBOR—(London Inter-Bank offered rate), should be enough to restore a healthy rate of growth if the debtors have sensible economic policies in place.

Most banks have already substantially cut their Latin American exposure and created large reserves against anticipated losses. But the United States and other creditor governments—either directly or through international financial institutions—will have to provide at least partial guarantees to the banks to assure them that remaining debt obligations will indeed be paid.

Several estimates place the up-front cost of such guarantees at around $15 to $20 billion, most of which would have to come from the trade-surplus countries of Japan and Western Europe. However, the United States must also contribute its share. □

[Based primarily on information provided by economist Tim Baxter of the Agriculture and Trade Analysis Division, Economic Research Service.]

Austerity Policies No Solution for Brazil

Some Latin American countries, notably Brazil and Argentina, have tried to solve their financial problems by instituting economic measures aimed at controlling fiscal deficits and inflation. Both of these nations launched innovative anti-inflation campaigns in 1986 and 1987. But despite encouraging early results, these plans subsequently collapsed, underscoring the difficulty of achieving fiscal reform in weak economies where huge public sectors demand rapid improvement.

Brazil's President Jose Sarney froze all retail prices in 1986, slowing inflation markedly. However, the freeze caused shortages as goods were withdrawn from the retail market and diverted to the black market.

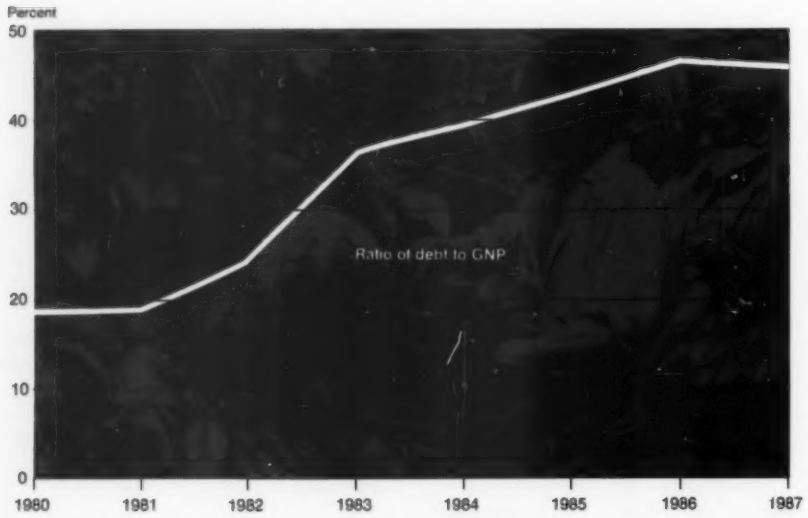
Agricultural goods were in short supply and manufacturers' costs were gravely affected as the government continued to borrow heavily to fund public sector companies selling goods and services at artificially low prices. The government rescinded the freeze in December 1986.

Prices then soared as manufacturers and public companies sought to recover costs and adjust prices to better withstand another freeze. "The government introduced a new package designed to stave off hyperinflation that consisted of a 90-day freeze on wages and prices, new rules on wage adjustments, and plans to cut public spending," explains ERS economist John Link. "Nevertheless, by the end of 1987 inflation began to rise again, while the authorities sought to adjust prices in the public sector, and pressure for wage increases intensified."

ERS economist Tim Baxter identified "indexation" (the linking of wages and prices) as a major source of the hyperinflation that plagued Brazil in 1988. "It helps the better-off keep pace with inflation," he said, "but poorer classes can't take advantage of indexing, and are disproportionately hurt." Baxter went on to explain that an economic cycle emerges in which indexation pushes up inflation, which drives up indexation, which in turn boosts inflation again. Heavy government spending and deficits also contribute to the problem.

In Brazil, Baxter estimates that an increase of 1 percentage point in the interest rate means the country owes another $1.2 billion in interest payments on its debt. Looking at it another way, Brazilians must divert another 4 percent of their exports, goods, and services to meet the costs of a 1-percentage-point rise in the interest rate.

Latin America's Outstanding Debt Has Grown to Nearly 50 Percent of Total Gross National Product (GNP)



Sources: World Bank, International Monetary Fund, and Economic Research Service.

Brazil launched the Summer Plan, its latest economic reform initiative, at the beginning of 1989. The plan calls for wage and price controls, currency reform, an end to indexation, and cuts in public spending. On January 16, the government devalued the cruzado by nearly 1,000 percent. Brazil also intends to issue its first farm bill this year.

Agricultural produce accounted for 55 percent of the value of all Brazilian exports during the late 1970's, and at least 38 percent in 1981-86. Brazil remains one of the world's most important traders of agricultural produce.

Although the government has tried to support domestic food crops in recent years, it is now reducing that support through its austerity plan and is privatizing an increasing number of agricultural markets.

Link notes that Brazilian agricultural techniques are mixed. "In many parts of the country, producers give little attention to fertilizer, seed selection, or effective crop rotation. For the most part, large scale mechanization is still confined to areas of Sao Paulo and the southern states, particularly Parana and Rio Grande do Sul."

The government cut credits to agriculture in 1982, forcing farmers to borrow from commercial banks. Agricultural production grew by 1.8 percent in 1983 and 3.2 percent in 1984. High prices for major food crops, combined with good weather, led to a record performance in 1985, when the sector expanded by 8.8 percent.

According to Link, "Brazil's debt will decrease its ability to import agricultural commodities. Brazil will also want to boost exports of coffee, soybeans, and other major products to increase foreign exchange."

Despite the nation's financial difficulties, Brazilian agriculture grew in 1988, albeit at a lower rate than in 1987. Although the prolonged dry spell in many areas reduced the production of such important crops as wheat, coffee, and sugar cane, these declines were partially offset by increases in other crops.

Agricultural production should also grow moderately in 1989. Soybeans will likely show major production gains because the U.S. drought boosted prices during Brazil's planting season. Tropical products, on the other hand, should increase only slightly. Meat production is also expected to rise moderately.

Brazil remains the world's largest coffee producer, and coffee continues to be among its leading foreign exchange-earning commodities. However, expectations of a large harvest this year have been thwarted by a persistent drought that has cut estimated production from 40 million bags to 26 million.

Coffee marketing is carried out by the Brazilian Coffee Institute, which sets prices, grades coffee for export, and represents the nation in the International Coffee Organization. The Sarney administration has streamlined the institute's operations and put its finances on a more secure footing.

Brazil produces more sugar cane than any other country and exports the largest amount to the free market. Much of the sugar is converted into fuel alcohol, for which production costs have become exceptionally high. "Also, attempts to boost fuel alcohol exports have been hampered," says Link.

Brazil is the world's largest exporter of soybean meal and is second only to the United States in production. The soybean and its derivatives constitute over 10 percent of the country's exports, virtually replacing

coffee as the major export earner. The acreage devoted to soybean production has been expanded during the 1980's by farmers turning away from coffee and grain production. They are also finding it more lucrative to produce the soybean crop because world prices have risen in the wake of the 1988 drought.

Oranges also represent an important addition to Brazil's export portfolio. Brazil supplies about 85 percent of the world's orange juice concentrate, and the contribution of orange juice to the country's export earnings has

been rising over the last few years. Orange juice exports should equal 665,000 tons in 1988, with a total value of $1.14 billion.

Brazil is the world's second largest cocoa producer, with an annual production potential of 480,000 metric tons. The 1988/89 cocoa crop is forecast at 410,000 tons. Brazil's cocoa export earnings for 1988 are estimated at $525 million.

Last year Brazil reversed its downward trend in broiler exports, raising them by 9 percent. Brazil is an important supplier of whole chickens and parts to Saudi Arabia, other Persian Gulf countries, Japan, and Cuba.

Although its long coastline has rich fishing grounds, Brazil's lack of infrastructure has until recently impeded the establishment of a substantial commercial fishing industry. But fish exports (primarily to the European Community and the United States) now make up an increasingly large share of export earnings. In 1984, for instance, Brazil exported some $166 million worth of fish.

Some 5.8 million square kilometers —68 percent of the country—are covered by forests and woodland. Most of the hardwood harvested is used in Brazil's domestic furniture industry. Pine, on the other hand, has become an important export, though its earnings have been eclipsed by those of timber products (mainly plywoods and planed woods), which brought in $309 million in 1986. Paper exports earned $860 million in 1987.

Other forest products are also gaining in economic significance: canned heart of palm; carnauba wax (used as a car wax), and babacu kernels (which yield an oil used in making soap and margarine). The traditional forest staples—brazil nuts and oiticica oil (used instead of linseed oil in paints, varnishes, and similar

products to produce a more water-resistant finish)—also remain an important source of income.

Brazil's Amazon rain forest comprises 30 percent of the world total. The amount of land that has been deforested is a matter of some debate. Some scientists estimate that 15 percent of the Amazon forest has been burned to clear land and build roads. The World Bank states that 12 percent of these virgin forests have been destroyed, while the newest figures released by the Brazilian government place this figure at 5.12 percent.

This rapid deforestation has alarmed environmentalists, who fear that it may well be contributing to the greenhouse effect, a global warming trend which some scientists fear could drastically alter the world's climates and have dire consequences for the production of agricultural commodities.

President Sarney recently introduced the "Our Nature" program, designed to set guidelines for socioeconomic activity in the Amazon region while preserving the environment. Sarney has also said that the government will create six working groups to examine legal and administrative reforms to halt or reduce what he termed the "predatory development destroying our flora and fauna."

During recent visits to Brazil, U.S. congressmen have discussed with Brazilian officials the issue of "swapping debt for nature" to save the rain forest. The country's federal and local leaders acknowledge that some deforestation is taking place and are concentrating their energies on developing those areas which have already been deforested.

REPORTS IN THE NEWS

All About Wheat, State by State

Wheat was harvested from nearly 76 million acres in this country in 1949 but only about 53 million in 1988. Total production increased from 1.1 billion bushels in 1949 to 2.6 billion in 1984 (but fell to 1.8 billion in the drought year of 1988).

As with a number of other crops during the last several decades, yield increases have resulted in significantly higher production totals even though acreage has declined.

The highest average yield for wheat nationwide was 39.4 bushels per acre in 1983. (In 1949, the average yield had been just 14.5 bushels per acre.) The record high production year for the nation's wheat farmers was 1984.

Excess supplies, of course, have resulted in production cutbacks. Harvested acreage was below 56 million in both 1987 and 1988, the lowest level since 1973. (The drought affected 1988 yields and production, especially of spring wheat.)

This report, with 82 tables, provides state and national statistics on production, acreage, yields, prices, and value of production for all wheat, winter wheat, durum wheat, and other spring wheat during the last 40 years.

The data were previously available only from 23 statistical bulletins and crop reports, published as far back as 1956, many of which are now out of print.

The report shows that the value of all U.S. wheat production was more than $10.1 billion in 1981 but less than half that amount in 1986. Season average prices have been below $3 per bushel in 9 of the last 20 years and above $4 just once, in 1974.

State-Level Wheat Statistics, 1949-88 *by Jim Langley and Suchada Langley. Published March 1989; 86 pages; $8 ($10 to non-U.S. addresses).*

Poultry Trends, Year by Year

In 1960, U.S. broiler production was valued at just over $1 billion, eggs at $1.8 billion, and turkeys at nearly $0.4 billion.

By 1986, receipts for the three commodities had increased nearly fourfold, with broilers at 669 percent of the 1960 figure, turkeys at 526 percent, and eggs 191 percent.

Gross income from broilers, eggs, and turkeys combined increased from $3.4 billion in 1960 to $12.4 billion in 1986 (before falling to $11.2 billion in 1987).

This bulletin reports monthly, quarterly, and annual 1960-87 summaries of the major statistical series for eggs and poultry. The data on broilers, eggs, and turkeys cover such categories as production, stocks, trade, per capita consumption, production costs, and prices (farm, wholesale, and retail).

Some statistics on "other chicken" (not broilers) also are presented in the report, which contains 181 tables.

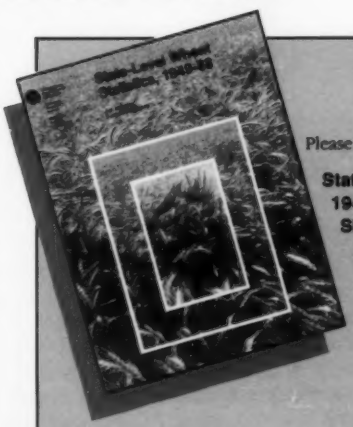
U.S. broiler production in 1987 amounted to more than 5 billion birds (21.5 billion pounds), up from 1.8 billion chickens (just over 6 billion pounds) in 1960.

As for eggs, the top production year during the time period covered was 1981 with 69.8 billion.

The number of eggs produced per laying hen increased from 209 in 1960 to 248 in 1987. The average price per dozen eggs went from 36 cents in 1960 to 72.3 cents in 1984 to 54.9 cents in 1987.

The number of turkeys produced in the United States increased from 84.5 million in 1960 to 240 million in 1987.

U.S. Egg and Poultry Statistical Series, 1960-87 *by Mark Weimar and Shauna Cromer. Published April 1989; 198 pages; $8 ($10 to non-U.S. addresses).*



Mail Order Form To:
ERS-NASS
P.O. Box 1608
Rockville, Maryland 20850

Please send me ____ copy(ies) of:
State-Level Wheat Statistics, 1949-88
SB-779
$8 ($10 outside U.S.)

Please send me ____ copy(ies) of:
U.S. Egg and Poultry Statistical Series, 1960-87
SB-775
$8 ($10 outside U.S.)

Total charges $ _____

Name _____

Address _____

_____

City, State, ZIP _____

Daytime phone ( ) _____

☐ Enclosed is $ _____ (make check or money order payable to ERS/NASS. Do not send cash.

Charge order to my
☐ MasterCard
☐ VISA

Account Number: ☐☐☐☐-☐☐☐☐-☐☐☐☐-☐☐☐☐

Expiration date: (Month/Year) ☐☐/☐☐

For fast, personal service, call our toll-free number 1-800-999-6779 and charge your order to MasterCard or VISA. Phone lines are open weekdays, 8:30-5:00 Eastern Time.

Federal Grazing Fees: Are They Fair?

It's an American tradition that always seemed natural. Cattle and sheep have been grazing on public land since the pioneer days of the old West.

But as land values increase and the condition of public lands is more closely examined, controversies arise over whether public land grazing privileges are actually providing economic benefits to livestock producers. Estimates by the USDA's Forest Service indicate that grazing fees on private land are as much as 2.5 times the rates the government charges for grazing on federal land.

Some analysts feel the system encourages the inefficient use of a public resource which could lead to overgrazing and degradation of rangelands.

Around the turn of the century, the federal government took over the management of public land used for grazing. The responsibility is shared by USDA's Forest Service (FS) and the Department of Interior's Bureau of Land Management (BLM).

Over the years, the job has evolved to include administering a fee system, used by both agencies, for use of the land.

In 1982, about 27,000 farmers and ranchers grazed their private livestock on public rangeland. Seven percent of the 386,000 livestock producers in 16 of the western states that allow private grazing on public land were involved. This represented 2 percent of the 1.6 million cattle producers in the United States in 1983.

The 307 million acres that the FS and BLM manage are divided into 30,000 allotments for 10-year permit periods and are leased to ranchers in return for grazing fees.

At issue is the fee charged for grazing. This year the federal government set the fee at $1.86 per month for adult animals. The fee is based on a formula which is intended to reflect annual changes in the cost of production of livestock.

Is the fee sufficient to cover the cost of repairs to riparian (streamside) areas damaged by the presence of watering livestock? And what about the costs involved in building fences and managing the restoration of pasture and rangeland that could erode if allowed to be overgrazed?

The benefit to livestock producers who use National Forest land for grazing is approximately $39 million.

Economist Marc Carey of USDA's Economic Research Service quotes USDA studies which show that in 1983 it cost the Forest Service and the Bureau of Land Management an average of $2.87 per AUM to administer the grazing program, $1.47 more than it charged. (An AUM is the amount of forage needed to sustain a 1,000-pound cow or the equivalent in sheep for one month.)

That year the combined BLM and FS deficit from the grazing program was $41 million.

The Forest Service estimates, based on the methodology of a 1986 USDA Grazing Fee Study, that the net benefit to the livestock producer who uses national forest land for grazing is $4.71 per AUM. Applying this figure to all National Forest and National Grassland grazing of 8.26 million AUM's, the estimated gross value to FS permit holders is approximately $39 million.

"Since their institution back in 1906, the fees have been a source of constant controversy among livestock producers, environmental groups, and federal land agencies," says Carey.

The economist explains that the federal government mandated that grazing fees be set at a level which reflects "fair market value" for the resource. "But such a mandate is seriously limited by the absence of a formal market mechanism through which buyers and sellers can establish the efficient market price of fees according to the laws of supply and demand," says Carey.

Grazing Fees Set By Formula

In 1978, the Public Rangeland Improvement Act (PRIA) adopted a formula for grazing fees based on $1.23 as "fair market value." This value was established in 1966 by the Western Livestock Grazing Survey, conducted by USDA's National Agricultural Statistics Service.

In the PRIA formula, the base value of $1.23 is updated annually through a series of indices that measure changes in private land lease rates, the price of beef cattle, minus the cost of livestock production.

The formula is intended to adjust the base value according to annual changes in the market value of public grazing land. But in fact, says Carey, the formula appears to have kept fees at levels below private grazing land base rates.

These are the annual fees charged all permit holders who graze livestock on public lands since the PRIA formula was first used in 1978:

Year	Fee/AUM
1978	$1.51
1979	1.89
1980	2.36
1981	2.31
1982	1.86
1983	1.40
1984	1.37
1985	1.35
1986	1.35
1987	1.35
1988	1.54
1989	1.86

Since fees are below levels charged for grazing on private lands, they may not reflect the true value of the resources to permit holders, Carey says. One component of the formula is the Forage Value Index, an index of annually surveyed, private grazing-land lease rates. This index adjusts the base value of $1.23 according to annual changes in the market value of public grazing land.

The other two components of the formula used to set the fees take into account the permit holder's ability to pay. That is the Beef Cattle Price Index, minus the PRIA

Prices Paid Index—the index of prices that ranchers pay for selected production inputs.

Carey says that the first component of the formula, the Forage Value Index, is an attempt to adjust for market variations in leasing rates on private land. "Yet private leasing rates, as any rancher will attest, depend wholly on the expected value of future profit streams as a result of livestock production. So the addition of the ability-to-pay components, which together measure future profits, is effectively double counting, demonstrating an inefficiency of the fee formula," says Carey.

Fee Formula Based on Sublease Rates

The economist suggests that a grazing fee could be established using the more complete market mechanism of the average that permit holders charge sublessees. The term "subleasing" is generally used to describe the practice of ranchers subleasing grazing privileges on federal lands from permit holders for a fee that is usually significantly higher than what permit holders are paying the government.

There is an established informal market for subleases of federal grazing privileges. ERS studies show that it is a relatively common phenomenon, especially in Montana, Wyoming, Utah, and Colorado where most subleases of federal grazing privileges are parts of larger leases which may include private deeded land, railroad land, or other types of land ownership.

"Subleasing grazing privileges of federal lands is a relatively new phenomenon, yet it may provide an appropriate method for determining fair market value levels for grazing fees," says Carey.

Out of the 30,000 allotments (ranging in size from less than 40 acres to more than 1 million acres), 800 to 1,000 are sublet.

In 1983 almost 23 million acres of public land were sublet. Although sublease rates varied widely across the different animal classifications, Carey estimates that the average fee, weighted by the percentage of leases written for each animal classification, came to $5.63 in 1983 dollars. The difference between what the government collected ($28 million) and what the permit holders that sublet the land received ($111 million, based on $5.63 average sublease

rate) was $83 million. Carey points to this discrepancy as evidence that the government may not be receiving fair market value for use of its rangeland.

Carey says that livestock groups support the current fee formula and think that it is working as it was intended. The fee fluctuates with market conditions, increasing during times of economic boom and decreasing when prices are depressed or costs rise. He says that ranchers claim that the fee formula provides needed stability and allows ranchers to plan annual business expenditures. They maintain that significantly higher fees would put many ranches out of business and would threaten their way of life.

But on the other side of the coin, "conservation groups tie overgrazing and the deterioration of public rangeland to undervalued fees," says Carey. "They assert that low fees constitute a subsidy for western ranchers who use public rangelands and encourage grazing of more animals than is optimal."

Higher fees, maintain environmentalists, would remove some of the domestic livestock from federal rangeland. Fewer grazing livestock would help restore the condition of some rangelands. Further, higher fees would help fund more range improvement, much of it needed because of livestock grazing.

"Regardless of where one's sympathy lies, many ranchers are clearly willing to pay substantially more for federal grazing privileges than the government presently requires," says Carey.

Other Fee Systems Evaluated

In a 1987 ERS report of the fee system, economists Ray Brokken and Bruce McCarl evaluated 8 proposed fee systems including 4 based on formulas, one on government costs, one on the returns to land, one on competitive bidding, and one on land values.

The economists concluded that none of the systems performed satisfactorily across all the criteria. These were their observations:

- Fee systems, to be equitable, should consider differences in the qualities of all parcels of land to be leased.

- Equity has generally referred to the public receiving its fair share of property values. However, discrepancies between fee levels and land values have historically been included in figuring base property values of ranches that have been sold. Fee increases would be inequitable to those who purchased those ranches.

- The formula system as it now stands contains redundant terms in the beef and cattle price index and the combined price index portions.

- A raise in fees would increase government receipts and would allow use of rangeland resources to be more economically efficient. More information is

needed on nongrazing use and administrative costs to devise the best-use fee level.

Brokken and McCarl suggested that the best alternatives seemed to be:

- Maintenance of a formula-based system that is simple to administer. They say that the best formula would be based on the Private Land Forage Value Index.
- Adoption of competitive bidding.
- Adoption of a system based on the cost of administration.

Public and Private Land Available

The level of use of public land represents 10 percent of the U.S. total rangeland forage and 2 percent of the total feed consumed by cattle in the U.S. Nearly half the sheep producers use public range. About one third of the beef cattle in the western states graze at least part of the year on public land.

Less than 2 percent of the allotments are not used. Of the sheep allotments, 4 percent are vacant while only 1 percent of the cattle allotments are.

Commenting on the availability of grazing land, ERS economist Arthur Daugherty says, "I find no evidence that the United States is short of, or in danger of becoming short of, grazing land. Large supplies of milk and other meats have resulted in prices too low for profitable production by many producers. Because of the recent dairy buyout program and the acreage planted to grass under the Conservation Reserve and Conservation Compliance programs, the nation should have even more grazing land available for livestock production in the future." □

[Based on information provided by economists Marc Carey and Arthur Daugherty of the Resources and Technology Division, Economic Research Service; Ray F. Brokken, formerly with ERS; and Bruce A. McCarl of Texas A&M University.]

Policy Changes Boost Wheat Exports

Policy provisions of the 1985 farm bill were responsible for about half of the 1985-88 increases in U.S. wheat exports, according to work done at USDA's Economic Research Service by economist Kenneth Bailey.

Expanded imports by the Soviet Union and China accounted for about 40 percent of the increase and lower wheat yields in competing countries the other 10 percent, Bailey says.

U.S. wheat exports grew from 900 million bushels in the 1985/86 marketing year to 1.6 billion bushels in 1987/88.

The Export Enhancement Program (EEP), initiated in May 1985 and further authorized by the 1985 farm bill, was responsible for about 30 percent of the 1986/87 expansion in wheat exports and about 20 percent of the growth since then. Lower U.S. wheat loan rates—a major policy change in the 1985 legislation—accounted for about 35 percent in 1986/87 and 27 percent in 1987/88.

"The significant expansion of U.S. wheat exports achieved the 1985 farm bill's objective of making this country more competitive in world markets," Bailey says.

He adds that without the factors he analyzed—EEP, lower loan rates, lower competitor yields, and increased Soviet-Chinese demand—U.S. wheat exports would have fallen significantly in 1986/87, then recovered to nearly 900 million bushels by 1988/89.

"Some of the wheat exported under EEP would have been sold anyway, because of other factors affecting the market."

"U.S. policymakers, of course, had no control over some of the factors, namely lower competitor yields and higher demand by the Soviet Union and China," Bailey notes.

Under the EEP program, the secretary of agriculture has authority to offer bonuses to exporting firms, to counteract European Community (EC) export subsidies. The program was aimed at lowering U.S. prices in targeted markets where competitor subsidies had eroded U.S. market shares.

Loan rates went from $3.30 per bushel in 1985 to $2.21 in 1988. The lower rates help reduce government-owned stocks and make U.S. wheat more competitive in world markets.

"Most of the surge in imports by the Soviets and Chinese was due to production shortfalls and changes in their internal policies," Bailey says, "although some is due to their reaction to lower wheat prices and the EEP, particularly in 1987/88."

Weather Also a Factor

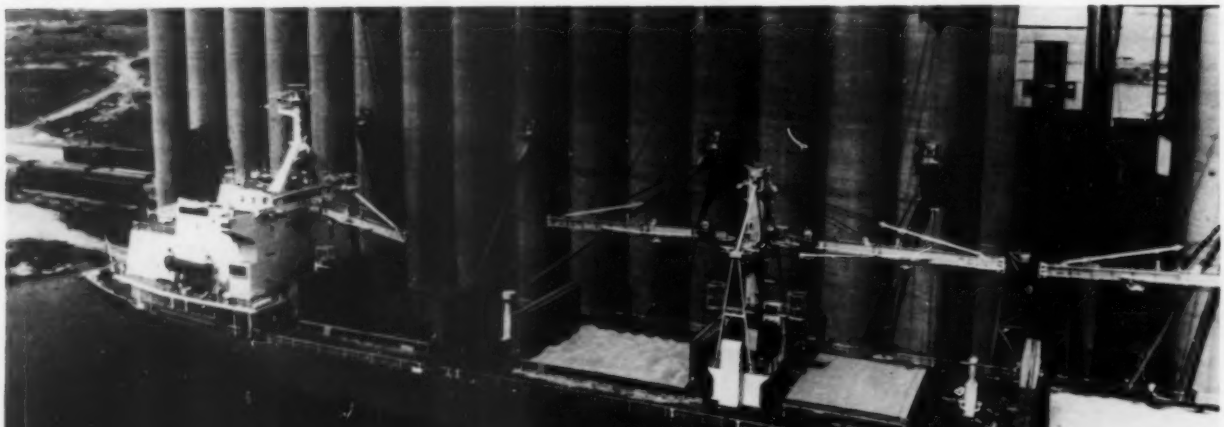
Bad weather reduced wheat supplies in other countries, relative to U.S. supplies, expanding the demand for U.S. wheat. In Canada, for instance, the 1988 drought cut production by 40 percent.

Shipments under EEP increased from 10 percent of U.S. wheat exports in 1985/86 to 65 percent in 1987/88. "But some of the wheat exported under EEP would have been sold anyway, because of other factors affecting the market," Bailey says.

EEP spending, per dollar, had less effect on 1987/88 and 1988/89 wheat exports than on 1986/87 sales, Bailey says. This was due to changing market conditions that produced less competition between the world's major exporters to sell and more competition between the world's importers to buy, he says.

"The ability of EEP to expand U.S. wheat exports depends on prevailing market conditions," Bailey says. In 1986/87, world grain supplies were very large, compared with use, and competition among exporting countries was keen.

"The EEP helped the United States become more competitive in targeted



markets," the economist says.

In 1987/88, market conditions changed significantly, as production by U.S. competitors fell and Soviet and Chinese import demand grew.

Conditions changed again in 1988/89, as the supply of U.S. wheat available for export decreased significantly. Stocks were reduced, and drought cut production. "The EEP accounted for about 23 percent of the increase in exports in 1988/89," Bailey says.

The EEP also has affected wheat program costs. "Farm prices would have been lower without the EEP, particularly in 1987/88, due to less export demand," the economist says. This lower farm price, combined with higher stock levels, would have raised deficiency payments and government storage costs.

"The EEP also has put pressure on the EC to change its trade-distorting policies," Bailey notes.

Production Cuts Small

The lower U.S. loan rate resulted in production cuts by competitors. U.S. prices heavily influence world prices. However, the harvested area in competing nations fell only 1-5 percent from what it would have been with the higher loan rate, according to the economist. He explains that domestic policies, especially in the EC and Canada, intervened to insulate producers from the lower world prices.

"The major effect of the lower wheat loan rate was to sharply trim U.S. stocks," Bailey says.

Wheat imports by the Soviet Union and China increased from 22.3 million tons in 1985/86 to 36.5 million tons in 1987/88, then fell to about 31 million tons in 1988/89.

The poor quality of the 1987 Soviet crop was the biggest factor in the increase in Soviet imports. In China, growing population, rising incomes, and falling grain stocks have accounted for the boost in imports.

"China may have taken advantage of the

EEP offers and allocated more hard currency reserves to purchase a larger volume of grain in order to rebuild its depleted stock levels," Bailey says.

Wheat yields in the EC and Australia fell below their 1985/86 levels in both 1986/87 and 1987/88 due to bad weather. Reductions in competitor yields, principally Canadian, accounted for 25 percent of the U.S. market expansion in 1988/89, Bailey says.

Little change in wheat exports in 1986-88 appears to be due to depreciation of the U.S. dollar, Bailey's research shows. But sustained depreciation of the dollar should have a positive effect on U.S. exports, over a longer period of time, he says.

"The 1985 farm bill had a very significant effect on U.S. export levels," Bailey says, noting that the legislation made the United States more competitive in world markets and lowered government stocks.

"But many factors are beyond the control of national policymakers." In recent years, such factors worked in unison with policy changes to increase U.S. wheat exports, he adds.

"Policy instruments, such as the EEP or lower loan rates, vary in effectiveness, depending on market conditions," Bailey concludes. □

[Based on information provided by economist Kenneth Bailey, formerly with the Commodity Economics Division, Economic Research Service.]

Farm Exports Bolster Nation's Trade Balance

The United States continues to have a larger positive trade balance in farm products than in any other category of exports.

In calendar year 1988, U.S. agricultural exports totaled $37.1 billion and agricultural imports $21 billion, for a surplus of $16.1 billion, says economist Tom Warden of USDA's Economic Research Service. Only four categories of merchandise trade registered surpluses last year, and the other seven showed negative trade balances.

The categories on the positive side, in addition to agriculture, were aircraft, ships, and railcars $15 billion, chemicals $13.2 billion, and data processing and office equipment $600 million. Those with negative balances were road vehicles $50.5 billion, mineral fuels and products $32.2 billion, miscellaneous manufactured articles $25.6 billion, household and electrical appliances $24.1 billion, textiles and apparel $22.2 billion, wood, pulp, and paper products $3.7 billion, and industrial machinery $1.9 billion.

Agricultural products accounted for 12 percent of the $308 billion in total U.S. exports for 1988 and 5 percent of the total imports of $437 billion, Warden says.

The only category of exports to total more, by value, than agricultural products in 1988 was industrial machinery, at $37.7 billion. The other category totals: chemicals $32.3 billion, household and electrical appliances $27.8 billion, road vehicles $25.4 billion, data processing and office equipment $23.1 billion, miscellaneous manufactured articles $22.1 billion, aircraft, ships, and railcars $21.3 billion, wood, pulp, and paper products $12.8 billion, mineral fuels and products $8.2 billion, and textiles and apparel $5.3 billion.

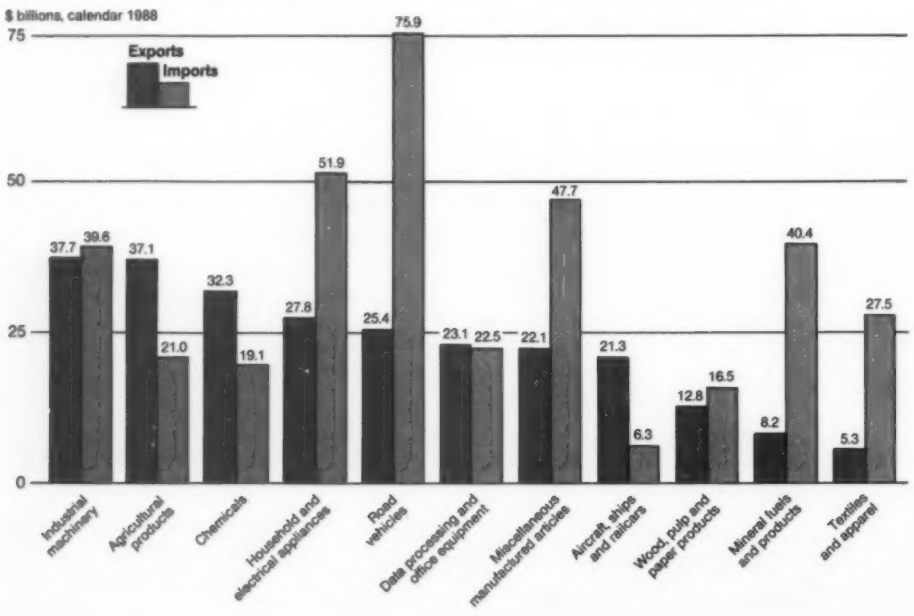
Among the categories of imports, agricultural products ranked eighth last year. The totals of purchases from overseas were: road vehicles $75.9 billion, household and electrical appliances $51.9 billion, miscellaneous manufactured articles $47.7 billion, mineral fuels and products $40.4 billion, industrial machinery $39.6 billion, textiles and apparel $27.5 billion, data processing and office equipment $22.5 billion, agricultural products $21.0 billion, chemicals $19.1 billion, wood, pulp, and paper products $16.5 billion, and aircraft, ships, and railcars $6.3 billion.

According to the latest USDA forecast, the agricultural trade surplus is likely to rise to $18 billion in 1989, once again leading all other categories in positive contributions to the U.S. trade balance. Agriculture might even overtake industrial machinery as the leading export category this year, Warden says.

U.S. agricultural imports are expected to show little or no growth this year over 1988 levels, the economist adds.

—Jack Harrison

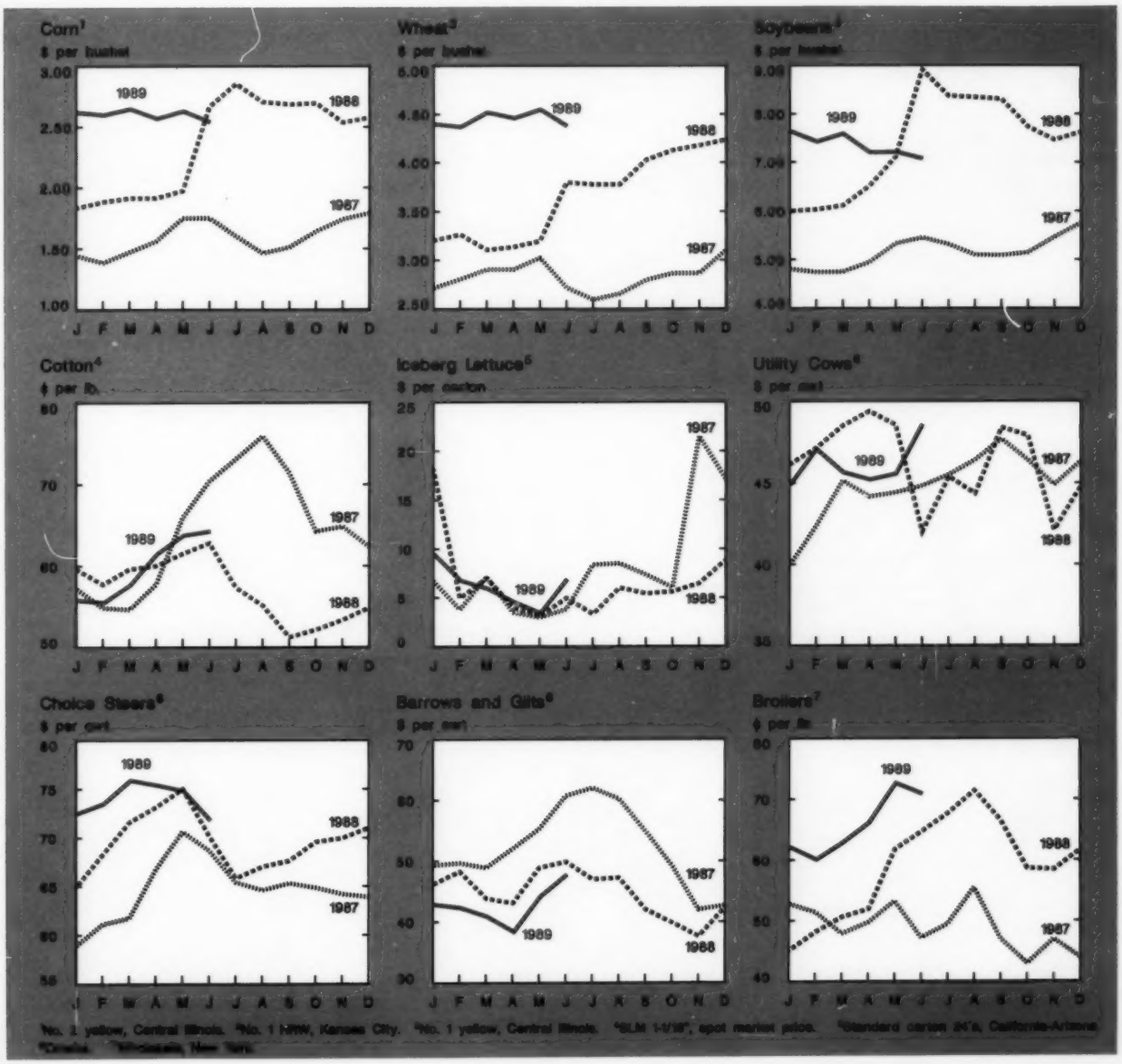
Agricultural Products Are One of the Largest Segments of U.S. Exports and Have the Largest Positive Trade Balance



FARMLINE TRENDS

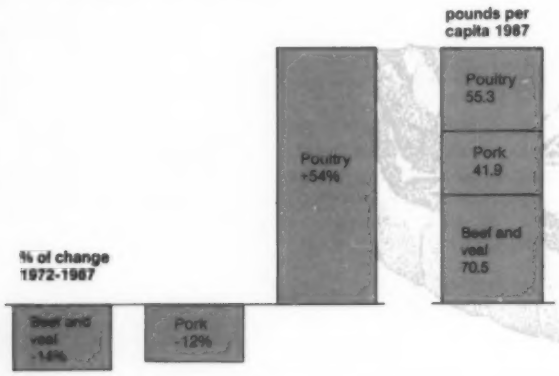
Monthly Price Monitor

USDA's June 1989 index of farm prices decreased 2% from May but was 5% above the year-earlier level. Corn prices fell 9¢ to $2.54, while wheat decreased 17¢ to $4.38 per bushel. Soybeans were down 14¢ to $7.08 per bushel. Cotton gained half a cent to 64.2¢ per lb. Iceberg lettuce jumped $3.48 to $6.81 per carton. In the meat animals area, utility cows gained $3.01 per cwt to $48.56. Choice steers declined $2.99 per cwt to $71.71. Broilers fell slightly to 70.7¢ per lb. Barrows and gilts increased $3.62 per cwt to $47.56. All prices shown are monthly averages.



America's Changing Menu

Americans Ate Much More Poultry in 1987 Than They Did in 1972. . .



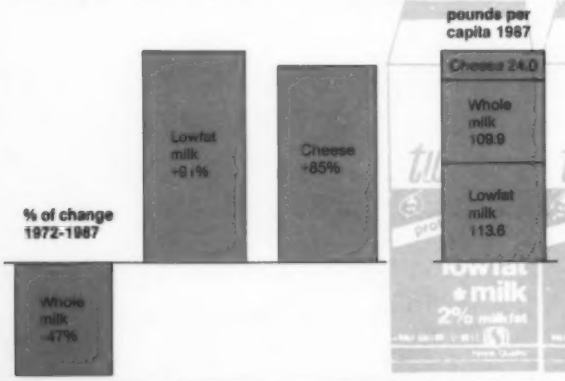
. . .But Beef Was Still the Popular Choice in 1987

Per Capita Consumption of Red Meat, Poultry, and Fish

	1972	1979	1987	Change, 1972 to 1987
	pounds per capita[1]			
Beef	80.7	73.5	69.2	-11.5
Veal	1.6	1.4	1.3	- 0.3
Pork	47.4	46.0	41.9	- 5.5
Lamb	2.2	1.0	1.0	- 1.1
Chicken	28.8	34.8	43.4	+14.6
Turkey	7.1	7.8	11.9	+ 4.8
Fish and shellfish	12.5	13.0	15.4	+ 2.9

[1]Boneless trimmed equivalent.

We Consumed About Half as Much Whole Milk, and Almost Twice as Much Lowfat Milk and Cheese

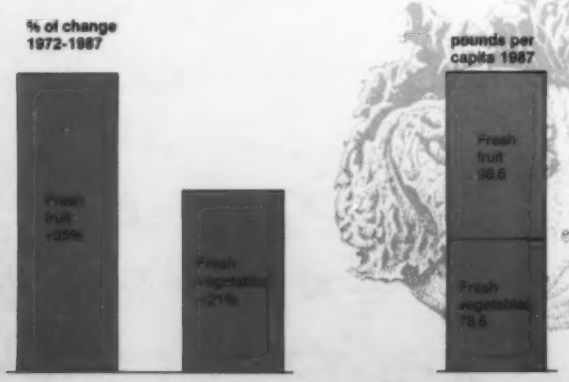


Lowfat Milk Choice Topped Whole Milk for the First Time

Per Capita Consumption of Dairy Products

	1972	1979	1987	Change, 1972 to 1987
	pounds per capita			
Whole milk	207.5	155.6	109.9	-97.6
Lowfat milks	59.6	88.1	113.6	+54.0
Yogurt	1.3	2.5	4.6	+ 3.3
Butter	5.0	4.5	4.6	- 0.4
Cheese	13.0	17.2	24.0	+11.0
Cottage cheese	5.4	4.5	3.9	- 1.5
Evaporated canned & condensed milk	5.2	3.0	2.2	- 3.0
Ice cream	17.6	17.3	18.3	+ 0.7

Sharp Increases in the Consumption of Some Noncitrus Fruits Pushed Fruit Totals Up



Lettuce, Onions, and Tomatoes Were the Vegetables We Ate the Most

Per Capita Consumption of Fresh Fruits and Vegetables

	1972	1978	1987	Change, 1972 to 1987
	pounds per capita[1]			
Apples	15.1	16.8	20.3	+5.2
Avocados	0.4	1.0	2.2	+1.8
Bananas	17.9	20.2	24.9	+7.0
Grapes	2.0	2.8	6.5	+4.5
Pineapples	0.7	1.4	1.6	+0.9
Strawberries	1.5	2.0	3.0	+1.5
Broccoli	0.6	1.0	3.3	+2.7
Carrots	6.3	5.4	8.2	+1.9
Cauliflower	0.8	0.8	2.4	+1.6
Onions	11.8	12.9	15.3	+3.5
Tomatoes	10.3	11.2	14.2	+3.9

[1]Retail weight equivalent. Citrus fruit and apples are on crop year basis. Other noncitrus on a calendar year basis.

Data from ERS report *Food Consumption, Prices, and Expenditures, 1966-87*, by Judith Putnam.

—Judith Foulke

ERS-NASS Video Tapes

☐ **ERS: Economic Research for American Agriculture**

An historical account of the role of economic research in the success of American agriculture.

16 1/2 minutes.
Order No. VT001 $15.00

☐ **Today and Tomorrow**

The U.S. Department of Agriculture's Outlook program analyzes the current situation for U.S. and world crops, and provides a forecast of future supplies and prices. "Today and Tomorrow" is an overview of the USDA Outlook program from its beginning in the 1920's, to the current compregensive program of research and analysis.

23 minutes.
Order No. VT002 $15.00

☐ **The Need To Know**

Begins with a futuristic "what if?" opening, and then proceeds to outline the history, significance, and contributions of agricultural statistics and USDA's National Agricultural Statistics Service.

23 minutes.
Order no. VT003 $15.00

☐ **Your Hometown**

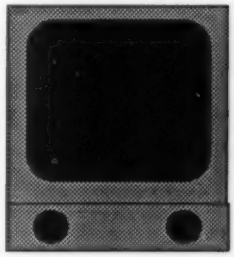
"Your Hometown" is an informative and entertaining look at small town rural America. Originally seen on public television stations nationwide, and narrated by James Whitmore, the program focuses on three rural communities where citizens use innovative thinking and teamwork to revitalize their own towns.

1 hour.
Order No. VT004 $15.00

☐ **Alternative Agriculture: Growing Concerns**

Can U.S. farmers produce at a profit while practicing low-input, sustainable agriculture (LISA)? "Growing Concerns" investigates the benefits and drawbacks of LISA. An excellent overview, this documentary was originally seen as a five-part series on national television.

19 minutes.
Order No. VT005 $15.00



For fastest service, call toll free, 1-800-999-6779 (8:30-5:00 E.T.)

- **Check selections above.**
- **Use purchase orders, checks drawn on U.S. banks, cashier's checks, or international money orders.**
- **Make payable to ERS-NASS.**
- **Add 25 percent extra for shipments to foreign addresses (including Canada).**
- **Sorry, no refunds**

Name _____

Organization _____

Address _____

City, State, Zip _____

Daytime phone _____

☐ Bill me. Enclosed is $_____ ☐ MasterCard ☐ VISA Total charges $_____

Credit card number ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Expiration date ☐☐ ☐☐ Month Year

Mail to: ERS-NASS
P.O. Box 1608
Rockville, MD 20850

Subscribe today! Call Our New TOLL-FREE number:

1-800-999-6779

To get the **whole** picture you need **all** the facts. . .

Order these Economic Research Service periodicals:

FARMLINE. Written for farmers, farm-related businesses, and others in agriculture. Concise articles, supported by charts and statistics, explain how the economic environment for agriculture is changing here and abroad. Focus is on the consequences of those changes for people in agriculture.

National Food Review. Covers the latest developments in food prices, marketing margins, consumption trends, nutrition, food retailing, product safety, export opportunities, and processing technology for those who manage or monitor the nation's food system.

Agricultural Outlook. Presents USDA's farm income and food price forecasts. Emphasizes short-term outlook, but also presents long-term analyses. Issues range from trade to commodity supply-demand prospects. Includes more than 20 pages of statistical indicators.

How to order
For fast, personal service, call and order today. Our toll-free lines are open weekdays, 8:30-5:00 Eastern Time. Or complete the order form and return to us.

*Order **now** by calling*
1-800-999-6779

Charge your order to MasterCard or VISA

Please check the appropriate boxes:

	1 Year	2 Years	3 Years
FARMLINE (11 issues per year)			
U.S. addresses	☐ $11	☐ $21	☐ $30
Foreign addresses	☐ $13.75	☐ $26.25	☐ $37.50
National Food Review (4 issues per year)			
U.S. addresses	☐ $10	☐ $19	☐ $27
Foreign addresses	☐ $12.50	☐ $23.75	☐ $33.75
Agricultural Outlook (11 issues per year)			
U.S. addresses	☐ $22	☐ $43	☐ $63
Foreign addresses	☐ $27.50	☐ $53.75	☐ $78.75

Total charges: $_____

Mail to: **ERS-NASS**
P.O. Box 1608
Rockville, MD 20850

☐ Enclosed is my check or money order payable to ERS-NASS.
☐ Please bill me.
Charge to my ☐ MasterCard ☐ VISA

Acct. No. _____ Expires _____

Please print or type:

Name _____

Company or organization _____

Street address or P.O. Box _____

City, State, ZIP _____

Day telephone no. ( ) _____